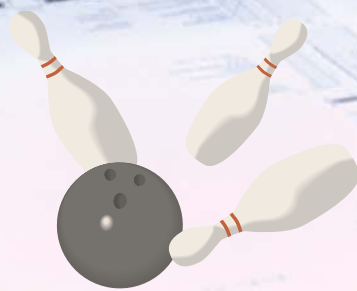




STRIKE

By Brian H. Temple



ZONE

Bob Grumberg, project manager with Europe District, points out the environmentally efficient "Green Roof" design section of the Stuttgart Bowling & Entertainment Center. The U.S. Army Corps of Engineers is managing Koch & Mayer's construction of the \$4.2 million upgrade to the bowling center which will double its size. It is expected to open in the fall of 2004.

Twice as many bowling pins may be flying in Böblingen, Germany, shortly after the Stuttgart Bowling & Entertainment Center's completion next fall.

The U.S. Army Corps of Engineers, Europe District, is managing Koch & Mayer's construction of the \$4.2 million upgrade on Panzer Kaserne, doubling its capacity from 12 to 24 lanes.

Brenda Lee McCullough, MWR Operations Chief for the 6th ASG Directorate of Community Activities, said the expansion comes with modern equipment, and will boast the best in sound systems.

The new equipment will feature "glow bowl"

contractor will make up the time."

Working to meet the schedule and the customer's needs is a primary concern for the local project engineer.

Phillip Pickett, a project engineer with Europe District, admits customer service is not traditionally taught in engineering school, but he has increased communication, however, with the contractors and the customer to help meet their needs.

During the current phase of construction, he said they are conducting monthly status meetings, but will increase to biweekly meetings when they begin work on the interior.

"I hope, that by communicating regularly with

Stuttgart bowlers soon to be bowling under the green

effects, a technology using black lights to illuminate glow-in-the-dark items such as bowling balls, pins, shoes, tables, carpet and artwork.

"The [center] will greatly boost the well-being of our community ... providing a family focused entertainment venue," she said. A children's soft play area, arcade, party room, and "Strike Zone" food establishment will also be featured.

Although the project is slightly behind, McCullough notes that construction requires adjustments from time to time, she is generally pleased with the progress. "I have been given assurances by the local Corps of Engineers [representative] that the

the customer and carefully listening to, and acting on their concerns, that I have succeeded in building some ... level of trust that I can maintain throughout the project."

He said the project is an indirect contract and managed through the Staatliches Hochbauamt Reutlingen under an international agreement known as ABG75. This gives the Bauamt primary oversight of Koch & Mayer's progress.

Keeping construction on time and cultivating customer relations is key, but working to save the customer money is as well.

Some features of the former facility are being



Photo by Brian H. Temple

Twelve lanes remain covered and protected in this structure that was once the original Panzer Kaserne bowling center in Böblingen, Germany, near Stuttgart. Expansion will double the size of the facility to 24 lanes and will feature "glow bowl" effects, a technology using black lights to illuminate glow-in-the-dark items such as bowling balls, pins, shoes, tables, carpet and artwork.

Photo by Brian H. Temple



“We will keep our eyes open to save the taxpayers money,” said Phillip Pickett, project engineer. “Since I’m also a taxpayer, this is one of my goals.”



Photo by Phillip Pickett

Ozkan Unsal (left) and Yelken Hasan, both with Koch & Mayer Bauunternehmung GmbH & Co. KG, pour concrete on the roof of the new Stuttgart Bowling & Entertainment Center in Boeblingen, Germany.

recycled. The exterior masonry walls, floor, roof and 12 hard maple bowling lanes, along with a walk-in freezer are being used again, Pickett said.

The original design called for the removal of mechanical, electrical and bowling alley systems to make way for new systems, but Pickett said he is looking for ways to shave additional costs.

Although there are no major costs saving Value Engineering changes on the project yet, Pickett said, “We will keep our eyes open ... to save the taxpayers money. Since I’m also a taxpayer, this is one of my goals.”

One external, aesthetic feature in the design may equate to savings for the customer.

“It’s called a green reversed roof,” Robert Grumberg, project manager for Europe District, said, and is designed to keep a constant temperature within the building. It involves filtered layers on a reinforced concrete structural ceiling with a six-degree pitch, laminated waterproof sheeting and bonded with watertight joints sealing it. Thermal insulation is placed on top, then a drainage layer, and then a filter layer of gravel topped off with soil and grass.

“In actuality, that piece is only costing about 15,000 Euro,” Grumberg said. “As far as a covering, its not that expensive” he said of the 50 feet by 24 feet portion of the roof.

The bowling alley will be air conditioned, Grumberg said, but with a green roof there is an insulation layer that amounts to a

heat sink. In the summer the temperatures will increase, in the winter they will decrease, but it is tipped as a heat sink or as a heat source, so it will help maintain a more constant temperature, he said.

"It may be more expensive to build and maintain but there is an equivalent savings with energy costs. The whole idea is to have more in savings on the heating and cooling," he said.

Green roof construction is popular in Germany, Grumberg said. "It tends to blend in with a natural environment, and a fair amount of people prefer a natural look."

This natural aesthetic approach was part of the original design.

Because the location of the site was excavated, the new roof will slope downward and end up approximately level to an adjacent elevated road. Grumberg said one would see a green roof adjacent to the road, versus roof ventilation and climate control systems.

"The green roof is more of a transition between the standing aluminum roof and the natural ground. It becomes architecturally pleasing, while at the same time it allows the area for the storage [and] the pinsetters room to be ... kept at a more constant temperature. It won't have to be heated up as much, nor do they have to cool it as much," he said.

Grumberg said the multi million-dollar facility is a major quality of life improvement for the community and he said people are asking when it will be completed.

New equipment will feature "glow bowl" effects, a technology using black lights to illuminate glow-in-the-dark items such as bowling balls, pins, shoes, tables, carpet and artwork.

He knows the Stuttgart community has some serious bowling enthusiasts too.

"I've seen soldiers and civilians bowling ... at lunchtime," he said. "People are greatly interested in when this is going to be ready."



Photo by Brian H. Temple

Phillip Pikcett (above), project engineer, ensures the former Panzer Bowling Alley's lanes are safely stored during construction. The \$4.2 million project will expand the facility from 12 to 24 lanes. This freezer unit (below) was saved and will be incorporated into new construction. Incorporating money saving measures into the design can provide big savings to the customers.



Photo by Brian H. Temple